AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. - 27. (Cancelled)

28. (Currently Amended) A method of embolizing a blood vessel or vascular malformation, comprising:

blocking blood flow in a blood vessel with a removable blocking member;

administering to the blood vessel or vascular malformation at or downstream from the blocking member a composition comprising a nucleophilic component and a component containing a conjugated unsaturated bond;~~, whereby the composition undergoes crosslinking within the blood vessel~~

crosslinking, within the blood vessel or vascular malformation, the nucleophilic component with the component containing a conjugated unsaturated bond so as to form a crosslinked emboli and occlude the blood vessel or vascular malformation; and

removing the blocking member from the blood vessel such that the crosslinked emboli embolizes the blood vessel or the vascular malformation.

29. (Original) The method of claim 28 wherein the nucleophilic component is selected from the group consisting of thiols, amines and mixtures thereof.

30. (Original) The method of claim 28 wherein the nucleophilic component comprises at least one thiol.

31. (Original) The method of claim 28 wherein the nucleophilic component is at least one material selected from the group consisting of pentaerythritol-tetrakis(3-mercaptopropionate) (QT) and poly(ethylene glycol)hexathiol.

32. (Original) The method of claim 28 wherein the component containing a conjugated unsaturated bond comprises at least one material selected from the group consisting of acrylates, vinylsulfones, acrylamides, quinones and vinylpyridiniums.

33. (Original) The method of claim 28 wherein the component containing a conjugated unsaturated bond is at least one acrylate.

34. (Original) The method of claim 28 wherein the component containing a conjugated unsaturated bond comprises at least one material selected from the group consisting of poly(ethyleneglycol)diacrylate, poly(propylene glycol)diacrylate, pentaerythritol triacrylate, and poly(ethylene glycol)tetraacrylate.

35. (Original) The method of claim 28 wherein the nucleophilic component is at least one thiol and the component containing a conjugated unsaturated bond is at least one acrylate.

36. (Original) The method of claim 35 wherein the nucleophilic component is at least one material selected from the group consisting of pentaerythritol-tetrakis (3-mercaptopropionate) and poly(ethylene glycol)hexathiol.

37. (Original) The method of claim 36 wherein the component containing a conjugated unsaturated bond is at least one material selected from the group consisting of poly(ethyleneglycol)diacrylate, poly(propylene glycol)diacrylate, pentaerythritol triacrylate, and poly(ethylene glycol)tetraacrylate.

38. (Original) The method of claim 35 wherein the component containing a conjugated unsaturated bond is at least one material selected from the group consisting of poly(ethyleneglycol)diacrylate, poly(propylene glycol)diacrylate, pentaerythritol triacrylate, and poly(ethylene glycol)tetraacrylate.

39. (Original) The method of claim 28 wherein the composition further comprises a buffer solution.

40. (Original) The method of claim 28 wherein the composition further comprises a surfactant.

41. (Original) The method of claim 28 wherein the composition further comprises a base.

42. (Original) The method of claim 28 wherein the composition gels within the blood vessel within 30 minutes of introduction.

43. (Original) The method of claim 28 wherein the composition gels within the blood vessel within 15 minutes of introduction.

44. (Original) The method of claim 28 wherein the composition further comprises at least one additional agent selected from the group consisting of radiopaque agents and nonsteroidal anti-inflammatory compounds.

45. (Original) The method of claim 31 further comprising a second thiole precursor.

46. (Original) The method of claim 45 wherein the second thiole precursor is dithiothreitol (DTT).

47. (Currently Amended) The method of claim 29 wherein the component containing a conjugated unsaturated bond ~~acrylate precursor~~ is polypropylene glycol diacrylate (PPODA).

48. (Currently Amended) The method of claim 29 wherein the component containing a conjugated unsaturated bond ~~acrylate precursor~~ is polyethylene glycol diacrylate (PEGDA).

49. (Currently Amended) The method of claim 29 wherein the component containing a conjugated unsaturated bond ~~acrylate precursor~~ is pentaerythritol triacrylate (TA).

50. (Original) The method of claim 39 wherein the buffer is a phosphate buffer.

51. (Currently Amended) The method of claim 41 [[~~42~~]] wherein the base is NaOH.

52. (Original) The method according to claim 28 further comprising increasing the pH of the composition prior to introducing the composition into the reproductive duct.

53. (Original) The method according to claim 28 wherein the composition is introduced into the blood vessel through a catheter.

54. (Original) The method according to claim 53 wherein the catheter is a balloon catheter.

55. (Currently Amended) The method according to claim 28 wherein the blood vessel for embolization has ~~one of either~~ an arteriovenous malformation ~~or any other abnormal vasculature~~.